

REMARKS

In the Office Action, the Examiner rejected claims 1-39. By the present Response, Applicants amend claims 1, 12, 16, 21, 26, 31, and 39 to further clarify the claimed subject matter, cancel claims 17, 25, 29, and 30, and add new claim 40. Upon entry of the amendments, claims 1-16, 18-24, 26-28, and 31-40 will remain pending in the present patent application. Applicants respectfully request reconsideration of the above-referenced application in view of the foregoing amendments and the following remarks.

Interview Summary

Applicants thank the Examiner for his participation in a telephonic interview with the undersigned representative on September 19, 2005. In this interview, the claims of the present patent application and the prior art of record were generally discussed. Particularly, during the interview, Applicants' representative and the Examiner discussed the differences, which are believed to be significant, between the teachings of the present application and the teachings of the prior art of record. While no particular agreement was reached with respect to the claims, the Examiner did indicate that the present application contains subject matter absent from the prior art of record, including the association of transaction order queues of Level 2 with the buses of Level 0, which is enabled by the transaction identifiers variously recited in the claims. *See Application,*

FIGS. 2-4. However, the Examiner maintained his belief that the previously examined claims did not clearly recite the subject matter absent from the prior art.

While Applicants do not necessarily agree with the Examiner on this point, Applicants amended the present claims to more particularly point out and distinctly claim certain subject matter which Applicants regard as their invention, including subject matter discussed in the interview. For the reasons provided below, independent claims 1, 12, 21, 26, 31, and 39, as well as their respective dependent claims, are believed allowable over the prior art of record. However, should the Examiner believe further clarification of the subject matter is necessary, Applicants kindly invite the Examiner to contact the undersigned representative to discuss the present amendments in greater detail.

Objection to the Specification

In the Office Action, the Examiner objected to the specification, alleging that a previous amendment of paragraph [0024] introduced new matter into the disclosure. While Applicants respectfully disagree with this assertion, in the interest of efficient prosecution, Applicants amended the specification to remove the material in question, as set forth above. In view of this amendment, Applicants respectfully request withdrawal of the Examiner's objections to the claims.

Rejections Under 35 U.S.C. §§ 102 and 103

In the Office Action, the Examiner rejected claims 1-4 under 35 U.S.C. § 102(a) as anticipated by Hausauer (U.S. Patent No. 6,138,192). Further, the Examiner rejected claims 12, 13, and 15-20 under 35 U.S.C. § 103(a) as unpatentable over the combination of Hausauer and “PCI-to-PCI Bridge Architecture Specification” by PCISIG. Additionally, the Examiner rejected claims 1-39 over allegedly admitted prior art in view of Hausauer. Applicants respectfully traverse these rejections.

Legal Precedent

Anticipation under Section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under Section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). Moreover, the prior art reference also must show the identical invention “in as complete detail as contained in the ... claim” to support a *prima facie* case of anticipation. *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989) (emphasis added). Accordingly, Applicants need only point to a single element not found in the cited reference to demonstrate that the cited reference fails to anticipate the claimed subject matter.

Further, the burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985).

Deficiencies of the Rejections

As noted above, Applicants have amended the claims of the present application to more clearly set forth the recited subject matter. Particularly, Applicants have amended various claims to clarify certain elements and the relationship between these elements, including the transaction order queues of the parent-bridge and the grandchild-links two levels removed, as discussed during the interview summarized above. In view of these amendments, Applicants respectfully assert that the rejections provided in the Office Action mailed July 22, 2005 are moot, and that the present claims are clearly allowable over the prior art of record.

As amended, independent claim 1 recites a parent-bridge comprising a plurality of transaction identifiers and a plurality of transaction order queues, “wherein each of the plurality of transaction identifiers is uniquely associated with only one of the plurality of transaction order queues and is associated with one of the grandchild-links.” Independent claim 12 recites a child-bridge comprising a plurality of grandchild-links and a plurality of transaction identifiers, “wherein each of the plurality of transaction identifiers is uniquely associated with only one of the plurality of grandchild-links and only one of a plurality of transaction order queues that receive the plurality of transactions from the child-link.”

Further, independent claim 21 recites a method of routing transactions comprising the step of receiving a transaction identifier indicative of an association between a transaction and a respective grandchild-link and “matching the transaction identifier to a transaction order queue of the plurality of transaction order queues for the child-link, wherein the transaction identifier is uniquely associated with only one of the plurality of transaction order queues such that the respective grandchild-link is uniquely associated with the one of the plurality of transaction order queues via the transaction identifier.”

Still further, independent claim 26 recites a method of routing transactions comprising the step of “originating a transaction identifier, wherein the transaction identifier is uniquely associated with the grandchild-link and a transaction order queue of the parent-bridge.”

Additionally, independent claim 31 recites a computer system comprising a parent-bridge comprising a plurality of transaction order queues and a child-bridge comprising a plurality of grandchild-links, "wherein each of the plurality of transaction order queues is associated with at least one of the plurality of grandchild-links to provide a one-to-one correspondence between the plurality of transaction queues and the grandchild-links." Finally, independent claim 39 recites a parent-bridge having a plurality of transaction order queue sets, each set having a plurality of transaction order queues, "each of the transaction order queues corresponding to at least one of the plurality of buses such that an association between the at least one of the plurality of buses and a transaction received from the at least one of the plurality of buses is maintained at the parent-bridge."

Applicants respectfully submit that these amendments to each of the independent claims are sufficient to overcome all of the Examiner's rejections. Specifically, Applicants respectfully submit, that the Hausauer reference does not disclose the features uniquely recited in each of the independent claims, as amended. Further, Applicants respectfully submit that the present amendments are sufficient to distinguish the claims from the related art described at pages 2 and 3 of the present patent application to which the Examiner made reference.

In summary, none of the art of record, taken alone or in combination, discloses, teaches or suggests transaction identifiers associated with transaction order queues in a parent-bridge and associated with the grandchild-links, as generally recited in independent claims 1, 12, 21, and 26, and as discussed during the Examiner interview noted above. Further, none of the art of record, taken alone or in combination, discloses or suggests a system comprising a parent-bridge comprising transaction order queues and a child-bridge comprising a plurality of grandchild-links, wherein each of the transaction order queues is associated with at least one of the grandchild-links to provide a one-to-one relationship between a grandchild-link and a transaction order queue, as recited in claim 31. Lastly, none of the art of record, taken alone or in combination, discloses or suggests a system having a plurality of buses coupled to a plurality of child-bridges, and a parent-bridge having a plurality of transaction order queues and coupled to the child-bridges, wherein each of the transaction order queues correspond to at least one of the buses such that an association of a bus and a transaction received from that bus can be maintained at the parent-bridge, as generally recited in independent claim 39.

Because none of the art of record, taken alone or in combination, discloses or suggests all of the features as recited in any of the independent claims, the cited references can neither anticipate the present claims, nor render these claims obvious. For these reasons, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. §§ 102 and 103 and allowance of claims 1-16, 18-24, 26-28, and 31-39.

New Claims

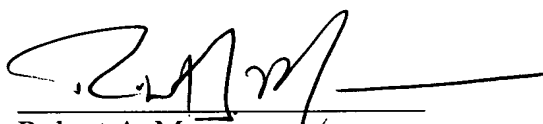
New claim 40 has been added by this Response. This new claim adds no new matter and is fully supported throughout the specification. Furthermore, in view of the earlier cancellation of claims 17, 25, 29, and 30, no fees are believed due for the addition of claim 40 in this Response. This new claim is believed allowable for its dependency from an allowable independent claim, as well as by virtue of the subject matter separately recited by the dependent claim. Accordingly, Applicants respectfully request consideration and allowance of dependent claim 40.

Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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